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Beverley C. Woodson

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BUCHANAN, INGERSOLL & ROONEY PC  
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EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1731

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/695,760 | <b>Applicant(s)</b><br>WOODSON ET AL. |  |
|                              | <b>Examiner</b><br>Jason L. Lazorcik | <b>Art Unit</b><br>1731               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, Claim 1, 33, and 34 all recite the limitation wherein "a tobacco-containing mat having a tubular form and **incorporated into** a tobacco rod of the electrically heated cigarette". While the instant application provides precedent for a tobacco-containing mat circumscribing said tobacco rod, no such precedent has been found for incorporating the mat into the rod.

Further in claims 1, 33, and 34, applicant recites the limitation wherein the electrical smoking system "generates smoke without combustion of the electrically heated cigarette". Regarding this claim limitation, Examiner has found precedent for "smoking of the cigarette without combustion of the cigarette paper, mat or tobacco" (¶[0093]), however no basis has been found to substantiate the amended claim language as presented above. In addition, the conventionally accepted meaning of the

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term smoke is as “the visible vapor and gases given off by a burning or smoldering substance, esp. the gray, brown, or blackish mixture of gases and suspended carbon particles resulting from the combustion of wood, peat, coal, or other organic matter.”

(*Dictionary.com Unabridged* (v 1.0.1). Random House, Inc.

<http://dictionary.reference.com/browse/smoke> (accessed: December 14, 2006).).

Where the Applicant has failed to provide an alternate definition or interpretation of said term, it is the Examiners position that the production of “tobacco smoke” from the claimed electrically heated cigarette necessitates the combustion of at least one component of said cigarette. Finally, the instant limitation directed towards the act of generating smoke from the cigarette is understood to take the form of an intended use for the claimed electrically heated cigarette. This statement of intended use fails in any manner to further limit the structure of the claimed cigarette and therefore lends no further patentable weight to the instant claims drawn to the cigarette itself.

Similar unsupported limitations have been presented in Claim 38 (“generates mainstream smoke without combustion”, line 3-4)

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4,and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McCarty (US 3,744,496).

With respect to Claims 1-2 and 4-5, McCarty teaches a carbon filled inner wrapper for "incorporation into" a tobacco column or for wrapping a tobacco column of a cigarette. Said inner wrapper is typically coated by an outer wrapping of conventional cigarette paper (Column 1, Lines 34-44), and in the inventive process said inner wrapper is constructed from pulped tobacco stalks or stems (Column 2, Lines 20-36). The McCarty wrapper which contains activated carbon (Column2, Lines 51-66) or a "sorbent" is understood to read in claim 1 as a "tobacco-containing mat having a tubular form". McCarty further clearly sets forth that "this invention also provides an excellent method for the addition of flavorants to a cigarette...The carbon holds the flavorant until it is released by the heat of the burning zone to go into the sidestream of mainstream smoke. Menthol, vanillin, and glycerrhizaz are examples of common flavorings for cigarettes and cigars" (Column 3, Lines 54-62)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-15, 17-23, 25-32, are 34-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (US 2005/0000531 A1) in view of McCarty (US 3,744,496).

As set forth in the previous office action, Shi teaches a method of adding a flavorant to a smoking article via the microencapsulation of said flavorant within a material having a melting point below the pyrolysis zone temperature of the smoking article. **As correctly pointed out by Applicant in the Office Action reply Dated October 27, Shi fails to explicitly teach the use of a “tobacco-containing mat” in the electrically heated cigarette. As set forth in the rejections under 35 SUC 102(b), McCarty clearly teaches the use of such a tobacco-containing mat as a “excellent method for addition of flavorants to cigarettes”. It would have been readily evident to one of ordinary skill in the art at the time of the invention seeking to incorporate the Shi microencapsulated flavorants into a cigarette to coat them onto the tobacco-containing mat as taught by McCarty.**

Specifically with respect to Claim 1, Shi (pg 1, ¶ [0009]) teaches a smoking article or “cigarette” herein referred to as a composition. This composition incorporates a filter with activated charcoal which is held equivalent to the claimed “at least one sorbent”

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and a plurality of microcapsules or "a flavor-release additive". The microcapsules include a filler material or "at least one flavoring" and display a melting point temperature or "minimum temperature". Upon heating said microcapsules to the melting point temperature, the flavoring is released.

Regarding Claim 2 and in light of the Claim 1 rejection above, Shi (Pg 1, ¶ [0009]) indicates that "the filter includes an activated charcoal or an activated carbon" which is understood to read on the immediate claim as a cigarette wherein the sorbent is activated carbon.

With respect to Claim 3 and in light of the Claim 1 rejection above, the immediate reference (Pg 1, ¶ [0008]) indicates that "a cigarette or other smoking article (may) incorporate an adsorbing material such as...zeolite" which is understood to read on the immediate claim as a cigarette wherein the sorbent is zeolite.

Again with respect to Claim 4, Shi indicates (pg1, ¶ [0009]) that "the filler material" or "flavoring" includes menthol.

Claim 5 is rejected in light of Claim 4 wherein the flavoring menthol is included in the "at least one flavoring" from the identified group of acceptable flavorings in the immediate claim.

Claim 6 is rejected in light of the Claim 1 rejection above wherein the microcapsules are understood to be of the general form of "beads"

Regarding Claim 8, Shi (pg 4, ¶ [0037]) indicates that the microcapsules have a typical size from about 10 nanometer or less to about 1000 micrometers or more which obviates the claimed size range of 25 microns.

Similarly regarding Claim 9, Shi (pg 4, ¶ [0037]) indicates that the microcapsules have a typical size from *about 10 nanometers or less* to about 1000 micrometers or more which reads upon the claimed size range less than about 1 micron.

With respect to Claim 10, Shi (pg 8, ¶ [0085]) discloses that microcapsules are added to the smokable material to provide a concentration of flavorant from less than about 0.001 wt. % to about 5 wt % flavorant on a tobacco weight basis. Further, the weight percent of filler that is incorporated into a single microcapsule in a typical preparation (pg 5, ¶ [0053]) based on the total mass of the microcapsule ranges from about 20% to about 60%. Shi (pg 4, ¶ [0040]) also indicates that the filling material is typically one or more flavorants, and is incorporated only "*optionally*" in combination with substances other than flavorants. Assuming, as Shi suggests above, that the filling is composed solely of flavoring, it is obvious that the cigarette necessarily comprises a weight percent of microspheres in the range of 0.001667% to 25% [eg.  $(0.05\text{g flavorant}/1.0\text{ g tobacco}) \times (1\text{gm microcapsule}/0.2\text{gm flavorant}) = 25\%\text{wt microcapsule}$ ]. Since the claimed weight percent concentration of beads of up to about 20% by weight based on the total weight of tobacco clearly falls within the above weight percent range of between 0.001667% and 25% by weight the immediate claim is obvious over the prior art.

Regarding Claim 11 and in accord with the above argument for the Claim 10 rejection, it was clearly set forth that the weight percent of filler that is incorporated into a single microcapsule in a typical preparation (pg 5, ¶ [0053]) based on the total mass of the microcapsule ranges from about 20% to about 60%. Further since the filling can



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be composed solely of flavoring (pg 4, ¶ [0040]) *or may include substances other than flavorants*, it is obvious that the beads or “microcapsules” described by Shi may comprise up to about 20% of the flavoring.

With respect to Claim 12, Shi indicates (pg 7, ¶ [0083]) that in a preferred embodiment, the microcapsules are deposited onto the smokable material, and that the combustion zone of tobacco are typically from about 600°C to about 900°C (pg 4, ¶ [0041]). Since the encapsulant or shell material display a melting point or “minimum temperature” from about 35°C or lower to about 200°C or higher (pg 4, ¶ [0042]), the minimum temperature is understood to be about 40°C. Further since the microcapsules are on the smokable material in the combustion zone during smoking, the beads are located in a region of the cigarette that reaches at least about 40°C during smoking of the cigarette.

As outlined in the Claim 12 rejection above, the microspheres or beads may be deposited on the tobacco (pg 7, ¶ [0083]) and it is a well established and common practice to incorporate tobacco into a tobacco plug or rod in the conventional design of a cigarette, Claim 13 is deemed obvious over the prior art.

With respect to Claim 14, Shi (pg 7, ¶ [0083]) indicated that the microcapsules are “deposited onto the smokable material”, and more specifically that the “*microcapsules may be applied as a suspension* in a suitable liquid” (pg. 8, ¶ [0084]). As a point of reference, the applicant indicates in body of the specification that “the film can be applied to one or more components of the electrically heated cigarette as a **liquid coating, which is dried to a film**”. Further, the applicant asserts (pg17, ¶

[0068]) that in a preferred embodiment, ***“an emulsion, suspension, or slurry comprising the binder, flavoring, and optional additives is prepared and then applied as a coating*** to one or more selected surfaces of one or more selected components of the electrically heated cigarette.” Since the microcapsules described by Shi comprise a binder and a flavoring, a suspension deposited onto the smokable material comprising said microcapsules in “a suitable liquid” is held equivalent to the process as related by the applicant through the following steps:

- 1) preparing an emulsion, suspension, or slurry comprising the binder, flavoring, and optional additives
- 2) applying said emulsion, suspension, or slurry as a liquid coating to a component of the cigarette
- 3) drying said coating form a film.

Regarding Claim 15 and in light of the Claim 14 rejection above, Shi discloses (pg5, ¶ [0049]) that the shell material or “binder” in the microcapsule include gum arabic which is read in the immediate context wherein the film comprises a binder from the group including gum arabic among other compounds.

Claim 17 is rendered obvious in light of the Claim 14 rejection above wherein the film is essentially composed of the microspheres and the argument set forth in Claim 10 rejection which indicated that the beads constitute up to 25% weight based on the total weight of the tobacco. In the present context, the film and the beads are compositionally held equivalent, and therefore the terms “the film” and “the beads” are interchangeable. Since the film consists of the beads and the beads constitute up to 25% wt. of the cigarette, the film constitutes up to 25% wt. of the cigarette and therefore “the cigarette comprises up to about 20% by weight of the film” as claimed.

Regarding Claim 18 and in light of the above arguments presented in Claims 14 and 17 and the rejection set forth for Claim 11 above. Specifically, the beads or "microcapsules" comprise up to about 20% of the flavoring and the beads essentially comprise the film. Therefore, the film comprises by weight up to about 20% of the flavoring.

Claim 20 is obvious in light of the rejections of Claim 14 and Claim 12 as set forth above. Specifically, Claim 14 indicated that the microcapsules are "deposited onto the smokable material" which is read in the immediate claim as creating a film of the flavoring-release additive. As outlined in Claim 12, the film is comprised of microcapsules and the film is deposited on the smokable material. Since said smokable material is in the combustion zone during smoking, the film is likewise located in a region of the cigarette that reaches at least about 50°C during smoking of the cigarette.

Regarding Claim 21 and in light of the Claim 14 rejection above the fact that it is a well established and common practice to incorporate tobacco into a tobacco plug or rod in the conventional design of a cigarette

Regarding Claim 22, Shi (pg 6, ¶ [0058]) indicates that the microcapsule may be formed by a complex coacervate or cluster of molecules wherein a pair of oppositely charged molecules or polymer particles are bound together by electrostatic attraction. This synthetic approach described by Shi is held equivalent to the claimed "inclusion complex wherein the host molecule and flavoring are collectively considered the pair of oppositely charged molecules. As a specific example presented by Shi, a flavorant or filler dispersed in gelatin is encapsulated by a coacervate between gum Arabic with the

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gelatin. Therefore in the context of the present claim the flavorant and gelatin are considered the guest molecules in the host shell of gum Arabic.

Claim 26 is rejected in light of the rejections of Claim 22 and Claim 20 above. Specifically Claim 22 sets forth a case wherein the flavor-release additive is an "inclusion complex" and by the Claim 20 rejection wherein a film of said inclusion complex on cut tobacco will reach at least 60°C during the smoking of the cigarette.

With respect to Claim 28, Shi (pg 13, ¶ [0148]) indicates that the "filters of preferred embodiments may also contain various other adsorptive, absorptive, or porous materials" and that "Examples of such materials, include, but are not limited to cellulosic fiber" which renders obvious the claimed cigarette comprising "a filter having fibers incorporated therein".

Continuing with Claim 29, Shi (pg 14, ¶ [0150]) indicates that the filter material may have the form of a non-woven web of fibers or a tow". Although the reference is silent regarding the length scale for said fibers as between 0.01 and .2mm, absent unexpected results to the contrary it would have been obvious to one of ordinary skill in the art at the time of the invention to implement fibers in the claimed length range.

Claim 30 is obviated by Shi (pg 14, ¶ [0149]) wherein it is disclosed that "the adsorptive or absorptive component...is generally ***dispersed within the porous filter material*** of the filter segment". In the immediate context, the term "dispersed within" is held equivalent to "impregnated with" as claimed. In light of the Claim 28 and 29 rejections, this disclosure reads on the present claim wherein the fibers are impregnated with at least one sorbent.

Claim 31 is obvious over Prior Art by Shi (pg 1, ¶ [0009]) wherein in order to construct the described smoking article as a single, unitary body from an individual filter and an individual tobacco rod, it would be obvious to attach said rod to said filter.

With respect to Claim 32, Shi indicates (pg 13, ¶ [0140,0141]) that “smoke produced from the smokable material passes into the filter before entering the smoker and the filter “removes at least one undesired component from tobacco smoke”. It is a well established process in the practice of utilizing a cigarette that said cigarette be heated in order to form the smoke. Further as described by Shi, this smoke is drawn through the cigarette with a cocurrent advance of the heated region down the tobacco column. As indicated above, the flavoring-release additive heated adequately within such an advancing heated region releases its flavoring into the mainstream smoke.

Claim 34 is obvious in light of the Claim 1 rejection under 35 USC 103(a) above and the rejection of Claim 6 wherein the microcapsules or flavor-release additive was equated to the as claimed “beads”.

Claim 35 is obvious in light of the Claim 34 rejection above and the disclosure by Shi (pg 5, ¶ [0045]) which states that microcapsules with varied melt temperatures can be included in a single cigarette to ensure a constant release of menthol”. This disclosure reads on the immediate claim as a case wherein at least two flavoring-release additives are incorporated with different minimum temperatures at which the flavoring is released during smoking.

Claim 36 is obvious in light of the argument set forth in the Claim 34 rejection above and the rejection of Claim 31.

Claim 37 is obvious in light of the argument set forth in the Claim 34 rejection above and the rejection of Claim 32.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (US2005/0000531) and McCarty (US 3,744,496) as applied to the Claim 6 rejection above and in light of Wakamiya (6,056,974). Shi and McCarty render obvious all of the elements of the parent claim 6 and Shi indicates (pg 1, ¶ [0016]) that the shell material or “binder” used in the microcapsules is chosen from among a group of compounds which include “water soluble cellulose”. Shi does not indicate that the indicated water soluble cellulose should be of a specific type (e.g. hydroxypropylcellulose or hydroxypropylmethylcellulose). Wakamiya (column4, Lines59-62), however indicates that “the cellulose coating agents (which) have high water-solubility,...include, for example, hydroxypropylcellulose and hydroxypropylmethylcellulose (HPMC).” It would therefore have been obvious to one of ordinary skill in the art at the time of the invention when selecting a water soluble cellulose for a binder as taught by Shi to utilize hydroxypropylcellulose or HPMC as taught by Wakamiya due to their high water solubility and relative ease of coating.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi in light of the rejection of Claim 14 above and the applicants disclosure in the body of the specification (pg.17, ¶ [0067]) that “the dimensions of the dried film are not limited”. Specifically, in the absence of any unexpected results outside of the claimed film thickness range, it would be obvious to one of ordinary skill in the art to empirically vary

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said film thickness to optimize flavorant delivery to the mainstream smoke while minimizing adverse impact of the film material on the burn rate of the tobacco shred.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi and McCarty as applied in the rejection of Claim 14 above and further in view of Bradley (4,195,645). As described above, Shi and McCarty render obvious all of the elements of Claim 14 wherein the microcapsules are applied to the tobacco shred or other component within the cigarette as a film cast from a solution based emulsion or slurry. Shi fails to indicate a case wherein "the film is preformed, shredded and incorporated in the tobacco plug or other selected locations" as set forth in the specification or wherein "the film is in shredded form" as disclosed in the immediate claim. Bradley presents (Column 2, Lines 2-5) a smoking material consisting of microencapsulated flavorants which provide a tobacco-substitute product having a flavor nearly approximating that of tobacco. Bradley continues (Column 8, Lines 6-15) by indicating that "from the standpoint of ...that the (microcapsule) compositions be in shredded film form." Further, the immediate reference (Column 8, Lines 21-37) sets out a scenario where films of the microcapsules are cast from solution dried to a thin sheet and cut or shredded prior to use. Given the disclosure by Bradley, it would be obvious to one of ordinary skill in the art when incorporating microencapsulated flavorants into a cigarette by the Shi process to incorporate them in shredded film form in order to facilitate the processing as indicated by Bradley.

Claims 23 through 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi (US 2005/0000531 A1) and McCarty in view of Demain (5,144,946).

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Specifically with respect to Claim 23 and as outlined above in the rejection of Claim 22 under 35 USC 103(a), Shi/McCarty teaches all of the elements of Claim 1 wherein the flavor release additive is an inclusion complex comprising a pair of oppositely charged molecules or polymer particles are bound together by electrostatic attraction. Shi fails to teach that one molecule of said pair of oppositely charged molecules, presently referred to as the "host" molecule, should be beta-cyclodextrin. Demain (Column 2, Lines 22-30) teaches the use of water soluble beta-cyclodextrin as component of a flavorant-release additive for use in flavoring smoke produced by a smoking article. Demain further indicates that this flavorant release additive is characterized by a lack of mobility and/or volatility at ambient temperatures (Column 2, Lines 1-5). It would therefore have been obvious to one of ordinary skill in the art at the time of the invention when selecting a flavor release additive for a tobacco product to choose beta-cyclodextrin as a component in a flavor-release additive due to its low ambient volatility. Specifically, a flavorant expressing low ambient volatility would be desirable in order to increase the shelf life of said tobacco product.

Regarding Claim 24 and in light of the Claim 23 rejection above, Demain (Column 2, Lines 45-48) indicates that "a cigarette smoking product with treated paper wrapper...contains between 0.01-5 weight percent of flavorant-release additive in the paper wrapper." This disclosure by Demain obviously reads on the immediate claim wherein an "over wrap" or treated paper wrapper comprises less than about 15% by weight of the inclusion complex.



Claim 25 is rendered obvious in light of the sample preparation as set forth by Demain in Example I (Column 4, Lines 47-56) and the rejection of Claim 23 as set forth above. Specifically it is indicated that 100mg (0.1g) of the flavorant Vanillin is mixed with 2 ml of a 45% weight/weight aqueous solution of beta-cyclodextrin. It is obvious that the inclusion complex comprises less than about 20% of the flavoring based on the total mass of the inclusion complex.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi/McCarty as applied to the Claim 22 rejection above and the disclosure (pg 16, ¶ [0171]) that components may also be added to the smokable material, or may be contained within the filter, the tobacco rod, or other components of the smoking articles" and that "Flavorants can be incorporated into the cigarette conventional techniques...*in addition to the microencapsulation technique described herein*" (pg 16, ¶ [0173])." This disclosure is read as incorporating the said microcapsules or flavor-release additives and flavorant in alternate locations within the cigarette in addition to or instead of the tobacco rod. In the present context, it is obvious that Shi intends to include other components of the cigarette (e.g. an inner wrap, a tobacco-containing mat, and/or an overwrap surrounding said mat) as a substrate for the microspheres as in commonly practiced when adding flavoring to mainstream smoke.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi as applied to the Claim 1 rejection above and the fact that it is old and well known practice to utilize a lighter during the smoking of a cigarette. Although Shi does not explicitly set forth the components of a smoking system as including both a cigarette and a lighter, it

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would be obvious to one of ordinary skill in the art engaged in the smoking of a cigarette as taught by Shi to pair the disclosed smokable cigarette with a heat source or "lighter" capable of igniting said smokable cigarette. Inclusive, said cigarette and said lighter constitute the claimed smoking system.

Further regarding Claim 38 and in light of the rejection of Claim 33 above, it is the Examiners position that "cigarette lighters containing "a plurality of electrical resistance heating elements sequentially heating the electrically heated cigarette" are old and well known in the art ([http://en.wikipedia.org/wiki/Car\\_cigarette\\_lighter](http://en.wikipedia.org/wiki/Car_cigarette_lighter)) and are therefore deemed obvious over said art.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

While Examiner agrees with the applicant's assertion that Shi fails to explicitly teach the use of a tubular tobacco-containing mat in the claimed cigarette structure, the teachings of McCarty as presented above would have rendered such an inclusion an obvious alternative to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL

  
ERIC HUG  
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